
Romanschulzia mexicana (Brassicaceae), a Remarkable New Species from Guerrero, Mexico

Ihsan A. Al-Shehbaz

Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166-0299, U.S.A.

Hugh H. Iltis

Department of Botany, University of Wisconsin–Madison, Birge Hall, 430 Lincoln Drive,
Madison, Wisconsin 53706-1381, U.S.A.

ABSTRACT. *Romanschulzia mexicana* is described as new and illustrated. It is readily distinguished from all other 12 species of *Romanschulzia* by its fruiting pedicels and gynophores that are both very long and rather slender.

Romanschulzia O. E. Schulz is one of two genera of the Brassicaceae (Cruciferae) that are distributed exclusively at high altitudes in the tropics (Al-Shehbaz, 1984). The other genus is the African *Oreophyton* O. E. Schulz. *Romanschulzia* consists of 12 species distributed from central Mexico south into Panama at 1,800–3,300 m (Rollins, 1942, 1956, 1984). The genus belongs to the Thelypodieae Prantl, a tribe considered by some to include genera that appear to be “primitive” among the Brassicaceae (Cruciferae) (Al-Shehbaz, 1973, 1985; Rollins, 1956). Because of its exceptionally long gynophores and shrubby habit, the new species was thought to be a member of the Capparaceae and thus was sent to one of us (H. H. Iltis). Iltis identified it as an unknown *Romanschulzia* because of its long gynophore, as well as the presence of a complete septum and incumbent cotyledons not invaginated between the radicle and cotyledons; the latter both are characters typical of Brassicaceae and not Capparaceae–Cleomoideae. Although the single collection on which *R. mexicana* is based contains no flowers, the species is described because of its unique fruiting material.

Romanschulzia mexicana Iltis & Al-Shehbaz, sp. nov. TYPE: Mexico. Guerrero: Mun. Leonardo Bravo, Pedregal, 28 km by road WSW of Filo de Caballo, 10 June 1985, *W. Thomas & J. L. Contreras* 3788 (holotype, NY; isotype, WIS; fragments, MEXU, UC). Figure 1.

Frutex scandens usque ad 2.5 m; folia petiolata lanceolata vel oblongo-lanceolata obscure denticulata, folia proxime infra racemos auriculata vel amplexicauli; ped-

icelli fructiferi tenuississimi, arcuati vel divaricati, 4–8 cm longi; gynophoro tenuississimo, 2–3.2 cm longo; fructus cylindricus, 2.5–4.1 cm longus; semina oblonga, uniseriata, 2.6–3.6 × 1–1.3 mm; cotyledones incumbentes.

Scandent shrubs to 2.5 m, glabrous throughout. Stems terete, green when young, becoming straw colored with age; lateral branches 3–10 cm long; pith solid. Lowermost leaves of lateral branches petiolate, lanceolate to oblong-lanceolate, 2.5–6 × 0.4–2.2 cm, cuneate at base, obscurely denticulate, acute at apex; leaves just below racemes sessile, auriculate to amplexicaul, with rounded to subacute basal lobes. Flowers not seen. Infructescences lax racemes, 3–7 cm long, terminating lateral branches; fruiting pedicels very slender, divaricate at base, strongly arcuate to straight, 4–8 cm long, 0.3 mm diam. Receptacle 1.2–2 mm diam.; nectar glands continuous, subtending bases of all filaments. Gynophore very slender, 2–3.2 cm long, ca. 0.3 mm wide, obscurely and longitudinally 4-striate or 4-winged. Fruit narrowly cylindrical, 2.5–4.1 cm long, 2–3 mm wide; valves acute at both ends, with a prominent midvein and conspicuously reticulate lateral veins; septum complete, thin, opaque, pushed to valves by seeds on other side; style absent; stigma entire, minute. Seeds narrowly oblong, brown, 2.6–3.6 × 1–1.3 mm, plump, uniseriately arranged in each locule, wingless, faintly and minutely reticulate, with a tiny appendage distally; cotyledons incumbent, that facing radicle smaller.

Distribution. Known only from the type material, collected in forests and pasture on karstic limestone at 1,800–1,900 m.

The relationship of *Romanschulzia mexicana* is not entirely clear. The shrubby habit in *Romanschulzia* is known only in another species, *R. apetala* Rollins, which is a narrow endemic of the Cordillera Talamanca, Prov. Cartago, Costa Rica, once collected by R. W. Holm and H. H. Iltis in 1949 (*Holm & Iltis* 536, MO). However, the latter, only

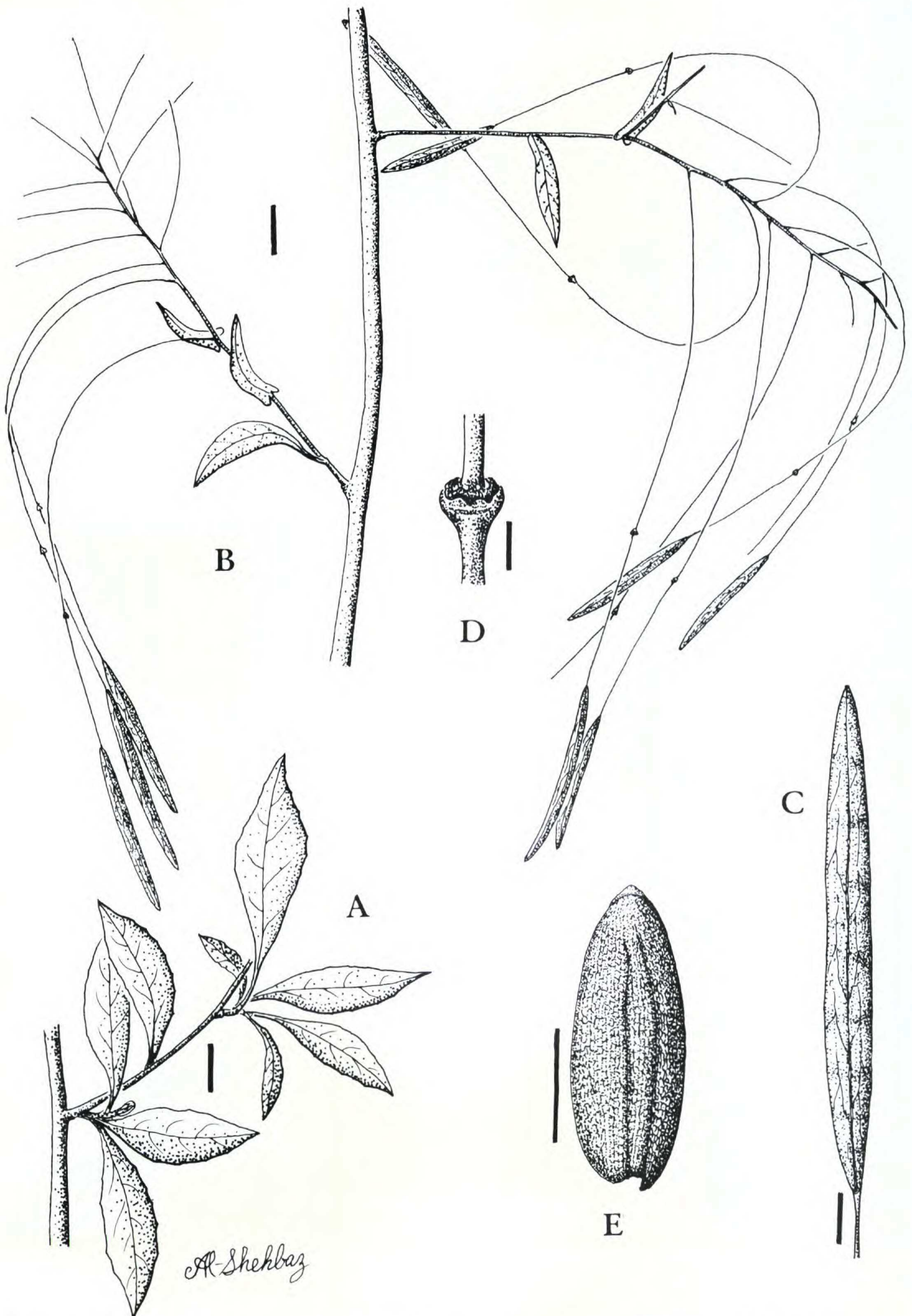


Figure 1. *Romanschulzia mexicana* Iltis & Al-Shehbaz (Thomas & Contreras 3788). —A. Lateral vegetative branch. —B. Inflorescences. —C. Fruit. —D. Receptacle. —E. Seed. Scales A–C = 1 cm; D, E = 1 mm.

remotely related to *R. mexicana*, is readily distinguished from the new species by its long cauline leaves to 7 cm, flattened fruits, slender styles 4–5 mm, shorter gynophores 5–8 mm, biseriate seeds, and stout pedicels 1.5–2.5 cm.

Romanschulzia mexicana is easily separated from all other species of *Romanschulzia* by its very slender, arcuate to spreading fruiting pedicels 4–8 cm long, slender gynophores 2–3.2 cm long, prominently veined fruit valves, and sessile stigmas. In fact, the combination above of the very long and slender pedicels and gynophores is rather unique in the Brassicaceae, and the only other genus with such long gynophores, but with much shorter (0.4–2 cm) fruiting pedicels, is the western North American *Stanleya* Nuttall, another member of the tribe Thelypodieae.

Literature Cited

- Al-Shehbaz, I. A. 1973. The biosystematics of the genus *Thelypodium* (Cruciferae). *Contr. Gray Herb.* 204: 3–148.
- . 1984. The genera of Cruciferae (Brassicaceae) in the southeastern United States. *J. Arnold Arbor.* 65: 343–373.
- . 1985. The genera of Thelypodieae (Cruciferae: Brassicaceae) in the southeastern United States. *J. Arnold Arbor.* 66: 95–111.
- Rollins, R. C. 1942. A tentative revision of *Romanschulzia*. *Contr. Dudley Herb.* 3: 217–226.
- . 1956. Some new primitive Mexican Cruciferae. *Rhodora* 58: 148–157.
- . 1984. Studies on Mexican Cruciferae II. *Contr. Gray Herb.* 214: 19–27.